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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,838	08/05/2004	SOLOMON ZAROMB		4837
43500	7590	01/09/2008		
SOLOMON ZAROMB 95 706 WILLIAM DRIVE HINSDALE, IL 60527				
			EXAMINER	
			RAMDHANIE, BOBBY	
			ART UNIT	PAPER NUMBER
			1797	
			MAIL DATE	DELIVERY MODE
			01/09/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/710,838		ZAROMB ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Bobby Ramdhanie, Ph.D.		1797	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to Claims 1-8 have been considered but are moot in view of the new ground(s) of rejection. See new grounds of rejection below.

### ***Response to Amendment***

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 5 recites the limitation "said container means" in the claim. There is insufficient antecedent basis for this limitation in the claim.

### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-11 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 of copending Application No. 11/473748. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reasons:

6. Claims 1-11 of the instant application recite a "chamber" and the copending application teaches the chamber to be a "container."

7. Claims 1-11 of the instant application recite a "volume of ambient air" and copending application teaches this volume to be "ambient air."

8. Claims 1-11 of the instant application recites "preferably" and copending application teaches this to be "substantial."

9. Claims 1-11 of the instant application recites a "fine mist of droplets" and copending application teaches this "fine mist of droplets" to be an "injection of water sprays."

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-9, & 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Bentley et al (US5085673). Regarding Claim 1, Bentley et al teaches an apparatus for detecting the presence of an airborne chemical or biological analyte, the improvement comprising: A). A substantially gas- and liquid- containing chamber (Figure 1), B). Means for introducing an analyte-free collection liquid into said chamber (Figure 1), and C). Means for rapidly sampling a volume of ambient air and transferring said analyte therefrom into said collection liquid, said sampling means comprising an air intake means and an air venting means (Figure 1 & Figure 2); and D). Means for removing from said chamber, an analyte-enriched collection liquid; wherein said volume of air passes through a preferably horizontal air inlet and upwardly through a preferably vertical electrically conductive collector electrode tube with means for applying an electric field between said tube and a co-axial spiked wire- or rod-shaped discharge electrode, wherein said electric field is high enough to effectuate a corona discharge so as to generate ionized particles that could be driven towards said collector electrode by an electric field (Figure 3; Electrostatic Precipitator). Examiner takes the position that the electrostatic precipitator inherently has the physical properties claimed above.
3. For Claim 2, Bentley et al teaches the apparatus of claim 1, comprising means for introducing a fine mist of droplets into the air stream passing through said collector tube so as to cause wetting of the inner surface of said tube by a liquid film (Column 1 lines 48-49).

4. For Claim 3, Bentley et al teaches the apparatus of claim 2, wherein said mist is generated by an ultrasonic humidifier (Column 1 lines 48-49).
5. For Claim 4, Bentley et al teaches the apparatus of claim 2, comprising means for generating and transmitting ultrasonic waves across the interface between said tube and said liquid film so as to help transfer particles or biological cells adhering to the tube surface from said surface into said film (Column 1 lines 48-49).
6. For Claim 5, Bentley et al teaches a method for detecting the presence of an airborne chemical or biological analyte, the improvement comprising the steps of: A). Providing a gas- and liquid-containing means (Figure 1); B). Introducing a substantially analyte-free collection liquid into said container means (Figure 1); C). Rapidly sampling a volume of ambient air and transferring said analyte therefrom into said collection liquid (Figure 1), said sampling means comprising an air intake means and an air venting means (Figures 1 & 3); and D). Removing from said containing means an analyte-enriched collection liquid (Figure 1); E). Passing said volume of air through a preferably horizontal air inlet and upwardly through a substantially preferably vertical collector electrode tube (Figures 1 & 3); and F). Applying an electric field between said tube and a co-axial spiked wire- or rod-shaped discharge electrode, wherein said electric field is high enough to effectuate a corona discharge so as to generate ionized particles that could be driven towards said collector electrode by an electric field (Figure 3). Examiner takes the position that the electrostatic precipitator inherently has the above claimed features.



7. For Claim 6, Bentley teaches the method of Claim 5, comprising the step of introducing a fine mist of droplets into the air stream passing through said collector tube so as to cause wetting of the inner surface of said tube by a liquid film (Summary of invention).

8. For Claim 7, Bentley et al teaches the improvement of Claim 6, wherein said mist is generated ultrasonically (Column 1 lines 48-49).

9. For Claim 8, Bentley et al teaches the improvement of Claim 6, comprising the step of generating and transmitting ultrasonic waves across the interface between said tube and said liquid film so as to help transfer particles or biological cells adhering to the tube surface from said surface into said film (Column 1 lines 48-49 & Column 2 lines 60-64).

10. For Claim 9, Bentley et al teaches the apparatus of Claim 1, wherein said collector electrode is a metallic tube (Column 3 line 33). Examiner takes the position that the collector electrode is inherently metallic.

11. For Claim 12, Bentley et al teaches a method of capturing aerosolized sub-micron-size particles from a volume of air which comprises passing said air through an electrostatic precipitation-based aerosol collector (Summary of Invention & Column 2 lines 10-17). Examiner takes the position that an ultrasonic transducer is capable of generating a sub-micron mist particle size.

12. For Claim 13, Bentley et al teaches the method of Claim 12, wherein said sub-micron-size particles are virus particles (Column 1 line 33). Examiner takes the position that a virus is a micro-organism that inherently has airborne capabilities.

13. For Claim 14, Bentley et al teaches the method of claim 12, wherein said sub-micron-size particles are toxin particles (Column 1 lines 29-36).

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. Claims 10 & 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bentley et al in view of Thomas et al (US2916626). Regarding Claim 10, Bentley et al teaches the apparatus of Claim 1. Bentley et al does not teach that said collector electrode comprises an electrically conductive coating or foil applied to the inner surface of a non-conductive tube. Thomas teaches the feature of said electrode comprises an electrically conductive coating or foil (Column 1 lines 42-48). Thomas does not explicitly teach the tube is made of a nonconductive material. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination



of Bentley et al and Thomas with a non-conductive material tube because the amount of current within the space encased by the aluminum foil in the tube ranges between 12 to 15,000 volts.

17. For Claim 11, Bentley et al teaches the apparatus of claim 9. Bentley does not teach that the collector electrode has a roughened preferably sandblasted inner surface. Thomas teaches the use of electrostatic precipitator which can be used to precipitate radioactive particles from an air sample (Column 1 lines 44-48). Thomas does not teach the use of sandblasting to roughen the inner surface. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the collector electrode by the use of sandblasting because when dealing with radioactive samples adhering to metal surfaces, chemical cleaning agents do not physically remove all of the radioactive substances from the electrode surface. A more physical rigid approach such as sandblasting the metal surface aids in the removal of the radioactive substance for reuse of the electrode with a new gas/air sample.

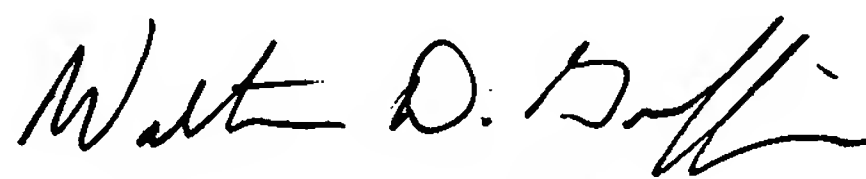
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bobby Ramdhanie, Ph.D. whose telephone number is 571-270-3240. The examiner can normally be reached on Mon-Fri 8-5 (Alt Fri off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BR

  
WALTER D. GRIFFIN  
SUPERVISORY PATENT EXAMINER